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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,444	12/18/2006	Petri Silenius	2835-0171PUS1	1768
2292 7590 09/30/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER CORDRAY, DENNIS R				
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
09/30/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

# Office Action Summary

**Application No.**

10/591,444

**Applicant(s)**

SILENIUS ET AL.

**Examiner**

DENNIS CORDRAY

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date 9/7/2006.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 11 recites the broad recitation "0.1 to 60%", and the claim also recites "5 to 35%", which is the narrower statement of the range/limitation.

Claim 12 depends from and inherits the indefiniteness of Claim 11.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by SU 1079717 A (supplied by Applicant along with a machine translation in the IDS dated 9/1/2006, translation used herein).

SU 1079717 A discloses a method of making paper comprising adding betulin in an amount from 0.2-2 % by weight of the fiber to a wood or wood flour pulp sheet (reads on added to the pulp) as a light fastness stabilizer, draining and making paper (p 2, 4<sup>th</sup> full par; p 3, top thru p 5, Examples 1 and 2). Paper comprising betulin is disclosed. Betulin and betuline are synonymous.

SU 1079717 does not disclose the betulin as a filler. However, the method of making paper and paper made are substantially identical to the claimed method and paper, and the betulin will also act as a filler because, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "Products of identical chemical composition can not have mutually exclusive properties."

Claims 2-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 1079717 as evidenced by the definitions of "slurry" and "suspension" (Hawley's Condensed Chemical Dictionary and Wikipedia) and by Smook .

The disclosure of SU 1079717 is used as above.

Claims 2 and 12: SU 1079717 does not disclose organic or inorganic fillers. However, fillers (e.g.- clay, talc, TiO<sub>2</sub>, etc.) are common papermaking additives and would have been obvious to one of ordinary skill in the art as additives to paper (see Smook, p 220, Table 15-1 if evidence is needed).

Claims 3, 4, 8-10, 13 and 19: SU 1079717 does not explicitly disclose an aqueous slurry of betulin or the particle size. SU 1079717 discloses dissolving 10 mg of betulin in ethanol and diluting with water to form a suspension. A slurry is a suspension of insoluble particles (Webster, slurry, pp 1 and 2); a suspension is a mixture of fine particles suspended in a fluid such as water (Webster, suspension, pp 1 and 4); Wikipedia defines a suspension as a heterogeneous fluid containing solid particles sufficiently large for sedimentation, usually larger than 1 micrometre. One of ordinary skill in the art would have found it obvious from the common definitions of slurry and suspension that the betulin of SU 1079717 is added as an aqueous slurry having a particle size of greater than 1 micrometer. The ethanol serves to disperse or stabilize the betulin, thus is the claimed excipient.

Claims 5 and 20: SU 1079717 does not disclose retention aids. However, retention aids are common papermaking additives incorporated into the papermaking

stock and would have been obvious to one of ordinary skill in the art as additives to paper (Smook, p 220 and Table 15-1). Since the betulin slurry of SU 1079717 is added to a wet sheet, it would further have been obvious that the retention aids are added to the stock before the formation of a wet sheet and treatment with betulin.

Claims 6, 7 and 14-18: SU 1079717 discloses examples of treating pulp using a suspension comprising approximately 0.1% by weight of betulin. Although higher concentrations of betulin are not exemplified, absent convincing evidence of unobvious results, it would have been obvious to one of ordinary skill in the art to make a slurry of any concentration of betulin as a functionally equivalent option.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Michelman et al (US 2003/0003285) discloses treating paper with a water borne composition comprising betulin.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS CORDRAY whose telephone number is (571)272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dennis Cordray/  
Examiner, Art Unit 1791

/Eric Hug/  
Primary Examiner, Art Unit 1791